

characterized by the concentration of formaldehyde generated from a formed object in a closed environment being less than 20 ppm. It was achieved by incorporating specific organic cyclic compound having active **imino** groups according to the formula (column 10, line 35). In Applicants' invention, the higher reactivity to reduce formaldehyde concentration especially by using primary **amino** compounds (claim 1) is caused by different formaldehyde absorption mechanism from that of the organic cyclic **imino** compounds of Shinohara.

In Gibbs, a superpolyamide and an antioxidant (col. 1, lines 14-17) are added to the composition of a polyacetal and basic amino compound to improve hydrolytic stability. In Applicants' invention, the formaldehyde odor is reduced by selecting those amino compounds that have the pKb prescribed by claim 1, 11 and 32, and thus are weak enough bases that they do not create instability in the composition. Additionally, Gibbs discloses the use of amino compounds to restrict **hydrolysis stability** of polyacetal compositions not to **reduce formaldehyde odor**. In contrast, the amino compounds in Applicants' invention reduce the formaldehyde odor. This is shown by Table 2, page 14 of Applicants' invention. As the TEF values show less stability in the TEF column, the formaldehyde odor is reduced by the additives of Applicants' invention. It is unexpected to those skilled in the art, that the formaldehyde odor results do not correlate with the melt stability test for formaldehyde. Thus, Applicants' invention is surprising and hence non-obvious.

In Fukumoto, the pKb range of "9.4 pKb or more (desirably about 10)" in column 4, lines 31- 33 teach away from Applicants' claim 1 and 32 where the pKB ranges from about 2-8. Secondly, Fukumoto teaches the use of an acid salts. Those skilled in the art, would not combine acid salt and POM (used in Applicants' invention) as it creates an unstable and potentially dangerous reaction. And Thirdly, Applicants' invention removes the formaldehyde odor from the POM in contrast to Fukumoto which removes offensive odors such as tobacco in the vapor phase. Applicants' invention has a formaldehyde concentration at room temperature of less than about 50% of the formaldehyde concentration of the polyacetal resin. Thus, it is not obvious to one of ordinary skill in the art to use the pKb of Applicants.

For the above stated reasons, the above cited art would not have been combined. However, assuming arguendo, that the above discussed prior art were combined, they still do not yield Applicants' invention. Neither Shinohara, Fukumoto nor Gibbs discloses a composition that uses amino compounds and have a pKB in the range of about 2-8 as in claim 1 and 32. Claim 10 has been amended to remove reference to aminobenzoate and is thus believed to be in allowable condition. Thus, these claims are believed to be in allowable condition for the above stated reasons.

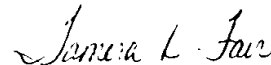
Claims 2-9, 11, 12 (as amended), 13-17, 28, 29 and 33-36 are dependent from these presumably allowable claims and are thus believed to be in condition for allowance.

In item 4 of the Office Action, the Examiner rejects claims 19-22, 30 and 37 under 35 USC §103(a) as being unpatentable over Shinohara et al in view of Minagawa et al (USP 4798836). These claims have been canceled making the rejection to these claims moot.

In item 5 of the Office Action, the Examiner rejects claims 23-27, 31 & 38 under 35 USC §103(a) as being unpatentable over Shinohara et al. in view of Adesunloye et al (USP 5874106). These claims have been canceled making the rejection to these claims moot.

In view of the foregoing, allowance of the above-referenced application is respectfully requested.

Respectfully submitted,



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VERSION WITH MARKINGS TO SHOW CHANGES MADE

In showing the changes, deleted material is shown as bracketed, and inserted material is shown underlined.

IN THE CLAIMS:

10. (Amended) A polyacetal resin composition comprising (a) a polyacetal resin, and (b) one or more amino compounds selected from the group consisting of diethanolamine, [ethyl *p*-aminobenzoate,] and methyl anthranilate [and butyl *m*-aminobenzoate;] wherein the composition is characterized by a formaldehyde concentration at room temperature that is less than about 50% of the formaldehyde concentration of the polyacetal resin itself.

12. (Amended) A composition according to Claim [10] 11 wherein the amino compound is ethyl *p*-aminobenzoate.

Cancel claims 18-27, 30, 31, 37 and 38.